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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,344	10/29/2003	Christian Schmid	200315617-1	8104

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EXAMINER	
SHAH, MANISH S	

ART UNIT	PAPER NUMBER
2853	

NOTIFICATION DATE	DELIVERY MODE
03/24/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/696,344	SCHMID ET AL.	
	Examiner	Art Unit	
	Manish S. Shah	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-2, 4-7, 9-12 & 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pentel KK (# JP 63-061065) in view of Mammen et al. (# US 2003/0226474 A1).

Pentel KK discloses a highlighter ink composition including (a) from 2 to 17 wt% of coloring material (b) from 65 to 85 wt% of an organic solvent; and (c) from 0.5 to 3 wt% of acid compound, wherein acid compound is ascorbic acid and coloring material is dye or pigment (see Abstract), and the value of pKa is constant to the material, and the ascorbic acid inherently has a pKa value of 4.2. So Pentel KK discloses the acid buffer having a pKa from about 2 to 6, more preferably from 4 to 6. They also disclose that the acid buffer includes a weak acid or weak base (see Abstract).

Pentel KK differs from the claim of the present invention is that (1) the highlighter colorant that is an acid-functionalized pigment or a fluorescent colorant. (2) The liquid vehicle includes water or diethylene glycol. (3) The highlighter colorant selected from Acid Blue 9.

Mammen et al. discloses a method of reducing smear (see Abstract; [0277]) during highlighting including the highlighter composition having a florescent highlighter

colorant (see Examples), and a liquid vehicle, wherein liquid vehicle is water, diethylene glycol, propylene glycol (see Examples), and highlighter colorant is fluorescent and selected from Acid Blue 9 ([0111], see Example: 3-4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the highlighter composition of Pentel KK by the aforementioned teaching of Mammen et al. in order to have smear resistance highlighter ink composition, which gives high quality image without smear.

2. Claims 3 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pentel KK (# JP 63-061065) in view of Mammen et al. (# US 2003/0226474) as applied to claims 1-2, 4-7, 9-12 & 27-28 above, and further in view of Kaufmann et al. (# US 5279652).

Pentel KK and Mammen et al. discloses all the limitation of the claimed invention accept that the acid buffer is succinic acid and the colorant is the acid functionalized pigment.

Kaufmann et al. teaches that to get the good crystallizing property, marking ink includes the acid buffer, which is selected from succinic acid (column: 4, line: 40-66) and colorant is pigment (column: 9, line: 40-50).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the acid compound in the highlighter composition of Pentel KK as modified by the aforementioned teaching of Kaufmann et al. in order to get the excellent crystallizing characteristic, which gives high quality image with less smear.

3. Claims 13-18 & 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mammen et al. (# US 2003/0226474) in view of Pentel KK (# JP 63-061065) and Kaufmann et al. (# US 5279652).

Mammen et al. discloses a method of reducing smear (see Abstract; [0277]) during highlighting including the steps of ink-jet printing an ink jet ink to form an image on a substrate ([0277]); applying a highlighter composition to the image ([0277]; see Examples), the highlighter composition including a highlighter colorant, which is fluorescent colorant ([0111]; see Examples), and a liquid vehicle (see Examples), and highlighter colorant selected from Acid Blue 9 ([0111]; see Examples: 3-4).

Mammen et al. differs from the claim of the present invention is that (1) the acid buffer has a pKa from 2 to 6, more preferably 4 to 6, wherein acid buffer is selected from ascorbic acid, acetic acid. (2) The acid buffer is succinic acid. (3) The acid buffer is configured for reducing mobility of colorants in the inkjet ink upon therewith.

Pentel KK discloses a highlighter ink composition including (a) from 2 to 17 wt% of coloring material (b) from 65 to 85 wt% of an organic solvent; and (c) from 0.5 to 3 wt% of acid compound, wherein acid compound is ascorbic acid and coloring material is dye or pigment (see Abstract), and the value of pKa is constant to the material, and the ascorbic acid inherently has a pKa value of 4.2. So Pentel KK discloses the acid buffer having a pKa from about 2 to 6, more preferably from 4 to 6. They also disclose that the acid buffer is configured for reducing mobility of colorants in the inkjet ink upon therewith and the acid buffer includes a weak acid or weak base (see Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the acid compound in the highlighter composition of Mammen et al. by the aforementioned teaching of Pentel KK in order to get the excellent drying characteristic, which gives high quality image with less smear.

Kaufmann et al. teaches that to get the good crystallizing property, marking ink includes the acid buffer, which is selected from succinic acid (column: 4, line: 40-66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the acid compound in the highlighter composition of Mammen et al. by the aforementioned teaching of Kaufmann et al. in order to get the excellent crystallizing characteristic, which gives high quality image with less smear.

4. Claims 19-26 & 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mammen et al. (# US 2003/0226474) in view of Pentel KK (# JP 63-061065) and Kaufmann et al. (# US 5279652).

Mammen et al. discloses a method of reducing smear (see Abstract; [0277]) during highlighting including the steps of ink-jet printing an ink jet ink to form an image on a substrate ([0277]); applying a highlighter composition to the image ([0277]; see Examples), the high lighter composition including a highlighter colorant ([0111]; see Examples), and a liquid vehicle (see Examples). They also disclose that the inkjet colorant is selected from pigment or water-soluble dye or mixture thereof (0277]); and the liquid vehicle includes a member selected from water, diethylene glycol and propylene glycol (see Examples).

Mammen et al. differs from the claim of the present invention is that (1) the acid buffer has a pKa from 2 to 6, more preferably 4 to 6, wherein acid buffer is selected from ascorbic acid and acetic acid. (2) The acid buffer is succinic acid.

Pentel KK discloses a highlighter ink composition including (a) from 2 to 17 wt% of coloring material (b) from 65 to 85 wt% of an organic solvent; and (c) from 0.5 to 3 wt% of acid compound, wherein acid compound is ascorbic acid and coloring material is dye or pigment (see Abstract), and the value of pKa is constant to the material, and the ascorbic acid inherently has a pKa value of 4.2. So Pentel KK discloses the acid buffer having a pKa from about 2 to 6, more preferably from 4 to 6. They also disclose that the acid buffer is configured for reducing mobility of colorants in the inkjet ink upon therewith and the acid buffer includes a weak acid or weak base (see Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the acid compound in the highlighter composition of Mammen et al. by the aforementioned teaching of Pentel KK in order to get the excellent drying characteristic, which gives high quality image with less smear.

Kaufmann et al. teaches that to get the good crystallizing property, marking ink includes the acid buffer, which is selected from succinic acid (column: 4, line: 40-66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the acid compound in the highlighter composition of Mammen et al. by the aforementioned teaching of Kaufmann et al. in order to get the excellent crystallizing characteristic, which gives high quality image with less smear.

Response to Arguments

5. Applicant's arguments filed 12/20/2007 have been fully considered but they are not persuasive.

6. Applicant argued on pages 8 & 9 of the remarks, that the Pentel does not disclose the what purpose or for what function the ascorbic acid derivative is used. According to the present claim language, as long as reference has same chemical it works for same function and solve the same purpose. In rejection of claims 1-12 & 27-28, the Pentel is a primary reference, so it doesn't required reasoning, why they use ascorbic acid. However applicant didn't claim the invention, why they use the ascorbic acid in the highlighter composition, to over the Pentel reference, applicant has to claim why they using ascorbic acid. Applicant in their own specification, they disclose that acid buffer is ascorbic acid, and Patel also teaches that highlighter contains ascorbic acid. Therefor Panel still reads on the present claim language.

7. Applicant also argued that the Mammen teaches away from the addition of acid. However, examiner combine this reference to show that to reducing smear (see Abstract; [0277]) during highlighting including the highlighter composition having a florescent highlighter colorant (see Examples), and a liquid vehicle, wherein liquid vehicle is water, diethylene glycol, propylene glycol (see Examples), and highlighter colorant is fluorescent and selected from Acid Blue 9 ([0111], see Example: 3-4). Therefor it obvious to combine Pantel and Mammen.

8. Applicant argued that the succinic acid in the Kaufmann reference is an anti-blocking agent. However applicant claimed "acid buffer", which means just acid, they

didn't claim why they using it. Therefore it is proper to combine the Kaufmann reference with Pentel and Mammen et al.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Manish S. Shah/
Primary Examiner
Art Unit 2853

/MSS/
3/12/2008